Region 9 Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105

Inspection Date(s):	3/4/2021		
Time:	**Entry:** 9:00AM	**Exit:** 11:30AM	
Media:	Water		
Regulatory Program(s)	Safe Drinking Water Act		
Company Name:	Hilmar Cheese Company		
Facility or Site Name:	WD-1, WD-2, WD-3, and WD-4		
Facility/Site Physical Location:	9001 North Lander Avenue-PO Box 910 Hilmar, CA 95324		
Geographic Coordinates:	37.41322528, -120.85894727		
Mailing address:	9001 North Lander Avenue-PO Box 910 Hilmar, CA 95324		
Facility/Site Contact:	Julie Connel	**Title**: Environmental Coordinator	
	Phone: (209)-656-1171	**Email**:jconnel@hilmarcheese.com	
Facility/Site Identifier:	CA10500001		
NAICS:	311513 – Cheese Manufacturing		
SIC:			

Facility/Site Personnel Participating in Virtual Inspection:

Name	Affiliation	Title	Email
Julie Connel	Hilmar Cheese	Environmental Coordinator	jconnel@hilmarcheese.com
Michael Wood	Hilmar Cheese	Director, Environmental Health, Safety, and Security	mwood@hilmarcheese.com

EPA Inspector(s):			
Grant Scavello	USEPA	Inspector	scavello.grant@epa.gov
Dave Basinger	USEPA	Permit Lead	basinger.david@epa.gov
Inspection Report Author:	Grant Scavello GRANT SCAVELLO Digitally signed by GRANT SCAVELLO Date: 2021.05.11 16:24:52 -07'00'		415-972-3556 **Date:**
Supervisor Review:	Eric Magnan ERIC MAGNAN Digitally signed by ERIC MAGNAN Date: 2021.05.11 15:01:49 -07'00'		415-947-4179 **Date:**

SECTION I – INTRODUCTION

I.1 Purpose of the Virtual Inspection

The purpose of the virtual inspection was to evaluate the operation of Hilmar Cheese Company's (Hilmar, Facility) Class I injection wells for compliance with the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Act (SDWA) and the Facility's Underground Injection Control (UIC) permit No. CA10500001 (Permit). This virtual inspection was conducted via a Microsoft Teams video conference call.

SECTION II – FACILITY / SITE DESCRIPTION

II.1 Facility Description

Hilmar Cheese Company engages in industrial scale cheese production at its facility located in Merced County, California. The Facility's current, administratively extended January 2006 Permit allows the Facility to inject Class I non-hazardous fluids into a maximum of four (4) injection wells: WD-1P, WD-2, WD-3, and WD-4. Currently, the Facility has two wells which are maintained and considered "active" per Permit guidelines. These wells are well WD-2, which is currently idle, and well WD-3, which is actively being used for fluid disposal. Well WD-1P was plugged and abandoned in November 2015, and well WD-4 has not been drilled.

II.2 Wastewater Sources

As stated in the July 7, 2011 minor modification #2 to the Permit, Part C.7: "Injection fluids will consist of Hilmar Cheese Company facility wastewater, including wastewater generated from the sanitizing of equipment and tanks, general facility wash down, equipment blow down, and tanker truck wash outs. Concentrated salt and ultrafiltration and reverse osmosis reject solutions (brine), separated from reclaimed water, make up the deep well injectate. Additional brine wastes from water reclamation or production areas may be blended with the salt concentrate solution. The brine solution may also contain trace contaminants from chemicals used in the treatment process, including residual minerals and organic material."

II.3 Wastewater Treatment

During the virtual inspection, Mr. Wood described the process of wastewater collection, treatment, and flow to the injection wells. Ms. Connel displayed a process flow diagram which confirmed the operational process.

Two main pits collect process water (PHOTO 1) that is then pumped to equalization tanks. Equalization tanks transfer the water to Dissolved Air Flotation (DAF) units #4, 5, and 6, which pull solids and fats from the process water. From the DAFs, the water runs through an anaerobic and aerobic digestion process. From the digestion process, the water passes through

an ultrafiltration unit. After passing through the ultrafiltration unit, the water is transferred to a deep well holding tank. Water is fed from the holding tank into the injection wells.

II.4 Compliance History

Inspector Scavello verified that there is one monitoring and reporting violation in EPA's iWells database from November 2010.

SECTION III – OBSERVATIONS

Prior to the virtual inspection, Inspector Scavello reviewed documentation submitted to EPA by Hilmar as part of the Facility's permit requirements. This documentation included the Permit, permit modifications, and quarterly reports for Q1-4 2020. After the virtual inspection, Inspector Scavello reviewed additional documents and photos requested from the Facility and listed below.

Observations from the virtual inspection are listed below.

Operations:

- Ms. Connel and Mr. Wood stated that they have worked for Hilmar for three-and-a-half, and one-and-a-half years, respectively, as of the date of inspection.
- Ms. Connel stated that the last mechanical integrity tests on WD-2 and WD-3 were completed in January 2021, and that results were pending. She noted that test results are due to EPA on March 29th, 2021, and that preliminary results showed that both wells passed their mechanical integrity test. She stated that there has not been a loss of mechanical integrity at either well during her time working at Hilmar.
- Ms. Connel stated that the last fall off test, radioactive tracer test, and temperature log were conducted on WD-3 in January 2021, and that there was not a fall off test, radioactive tracer test, or temperature log conducted concurrently on WD-2. She stated that these tests were not conducted because well WD-2 is idle.
- Mr. Wood stated during the inspection that the last step rate test was conducted on WD-2 in 2006, and that he was not sure when the last step rate test was conducted on WD-3. In the inspection response provided March 15, 2021, Mr. Wood included the WD-2 step rate test and explained that, "To date, there has not been a Step Rate Test performed at WD-3, in part as USEPA has not requested this methodology in recent years".
- A well workover was completed on WD-3 on November 16, 2015, and after passing a mechanical integrity test this well was returned to service. A detailed workplan for this workover was submitted as supplemental documentation after the inspection and reviewed by EPA.
- Ms. Connel stated that the last hazardous waste determination was completed in January 2021, and that there have been no changes in fluid constituents since that time.

- Mr. Wood stated that Hilmar is currently working on the Zone of Endangering Influence (ZEI) review. The Permit requires an annual review of the ZEI.
- Mr. Wood stated that the current financial responsibility instrument in place is an Amendment to Schedule A. Hilmar included this document in their inspection response. The Amendment is dated October 13, 2010 and lists a Plugging and Abandonment cost estimate of $174,510 for well WD-2, and $174,510 and WD-3 based on a date estimate of September 10, 2010.

Monitoring:

- The 2nd minor modification to the Permit, item C.8.b, states that "A minimum pressure of one hundred (100) psi at shut-in conditions shall be maintained on the tubing/casing annulus. The Permittee shall determine the range of fluctuation of annular pressure for the well during periods of normal operation and shall include this normal pressure range in their quarterly reports. Any annular pressure outside of the normal range shall be considered a loss of mechanical integrity and shall be reported per Paragraph 3(c) of this section". EPA asked Hilmar representatives what the range of fluctuation of annular pressure is for both wells, and Ms. Connel responded that there is not a range of fluctuation set. She responded that, using the data system for the well, pressure maintained on the annulus for well WD-2 is generally between 10-12PSI. After the inspection, EPA reviewed Q1-4 2020 quarterly reports and confirmed PSI data for annular and injection pressure on both injection wells. Well WD-2 annular pressure ranges between 0-35PSI. Well WD-2 injection pressure ranges between 0-56PSI. Eleven of twelve months show an annular pressure value of 20PSI or less for well WD-2. Well WD-3 annular pressure ranges between 0.1PSI and 958.5PSI. Well WD-3 injection pressure ranges between 0PSI and 500.5PSI. Eight of twelve months show minimum annular pressure values below 100PSI for well WD-3.
- PHOTO 3 shows an annular pressure data system readout of 10PSI at well WD-2 on March 10, 2021 at 10:03AM.
- PHOTO 4 shows an annular pressure gauge reading of 10.0PSI at well WD-2 on March 10, 2021 at 10:07AM.
- Ms. Connel stated that well WD-2 has been shut-in since March 2012, when Hilmar lost injectivity on the well. She stated that Hilmar is working to bring back the capability to inject into well WD-2, but it may not happen.
- Ms. Connel stated that well WD-3 has a booster pump attached which kicks on if the well experiences a drop in pressure, and that she was uncertain of what the setting is that triggers the pump. She also stated that there is no alarm system on the well to alert operators of an uncharacteristic drop in pressure.
- PHOTO 2, taken by Ms. Connel after the virtual inspection, shows an annular range pump setting for well WD-3 starting at 100PSI and stopping at 150PSI.
- The Q1 2020 Quarterly Report submitted by Hilmar notes that a data card error caused the loss of data for most of the month of January and the beginning of February 2020 at well WD-2. Ms. Connel explained that the WD-2 data collection system is outdated and collects monitoring information via data cards. She stated that data cards do not record

correctly if the data card isn't seated in the data card slot properly. The WD-2 data card system was not checked daily by operators, so if the cards were not recording it may not have been discovered for an extended period of time. Ms. Connel explained that to solve this issue a remote data system was installed in July 2020 and that recording has been consistent since then.

- Ms. Connel explained that an annular pressure sensor, injection pressure sensor, temperature sensor, and flow meter monitor annular pressure, injection pressure, temperature, and flow of the injection wells. A Supervisory Control and Data Acquisition (SCADA) system records data for wells WD-2 and WD-3 remotely and is backed up on a data card. Well WD-3 also has a circle chart recorder that can be used to backup data recording. The circle chart recorder is changed daily by an operator.
- EPA asked to see an example of the monitoring output for WD-3 generated by the SCADA system. Ms. Connel explained that the brown line represents injection pressure, and the green line represents annular pressure. She noted that the brown line fluctuates more than may be expected due to the injection pressure gauge's close proximity to the injection pump. After the inspection, Hilmar provided a snapshot of the monitoring output, which is shown as APPENDIX 1 below.
- EPA asked Hilmar to describe their gauge calibration schedule. Mr. Wood explained that their preventative maintenance plan and standard operating procedure (SOP) is currently under review. Mr. Wood explained that they replaced their flow meter and injection pressure sensor on WD-3 in November 2020, and that it was calibrated prior to installation.
- Mr. Wood commented that he was uncertain of the last time the annular pressure sensor was calibrated.
- Mr. Wood commented that, currently, there is no future calibration scheduled, but that will be determined as a part of the preventative maintenance plan and SOP.
- Mr. Wood commented that Hilmar plans to keep spare gauges available on site in case of malfunction.
- Hilmar included a calibration certificate for a Barton recorder in their inspection response. The recorder number is 202A-71115 and has a pressure range up to 3000PSI. The calibration date shown is November 12, 2015.
- Hilmar included an injection pressure gauge calibration certificate in their inspection response. The certificate shows a crystal gauge with serial number 164953 has a calibration expiration of June 22, 2016. It is unclear on which well this gauge is installed.

Facility Walkthrough:

- During the virtual walkthrough, Ms. Connel led EPA personnel on a tour of the injection well sites. Well WD-3 had an injection pressure reading of 388PSI, annular pressure reading of 336PSI, and a flow of 25 gallons per minute (GPM). Well WD-2 had an injection pressure reading of 11PSI and an annular pressure reading of 0PSI.

Inspector Scavello asked the Facility staff for the following photos at both wells as follow-up after the virtual inspection:

-Tap location (WD-2 & WD-3)
-Injection Pressure Gauge (WD-2 & WD-3)
-Annular Pressure Gauge (WD-2 & WD-3)
-Annular Pressure Pump (WD-3)
-Flow meter (WD-2 & WD-3)
-Full extent showing the wellhead (WD-2 & WD-3)
-Data System readout at both wells
-Process water collection pit

Inspector Scavello asked the Facility staff for the following documentation as follow-up after the virtual inspection:

-Results of the last Step Rate Test– WD-2
-Documentation of the November 2015 well workover on WD-3
-Type of corrosion inhibitor used on WD-2 & WD-3
-Manufacturer's recommendation for gauge calibrations of flow meter, annular pressure gauge, and injection pressure gauge – WD-2 & WD-3
-Date of last calibration or new gauge installations – WD-2 & WD-3
-PSI level at which WD-3 annular booster pump is set
-An example or screenshot of the monitoring output graph for WD-2 & WD-3 (if possible, from the date of inspection)
-Copy of most current Financial Responsibility documentation
-Current Plugging and Abandonment plan – WD-2 and WD-3

Hilmar provided all photos and documentation requested in a response dated March 15, 2021.

The virtual inspection concluded with a closing conference.

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

1) ANNULAR PRESSURE

a) Item C.8.b of the Permit requires that 100PSI be maintained on the tubing and annulus during shut in conditions. Well WD-2 has been shut in since March 2012. The injection pressure reading observed during the virtual inspection was 0PSI and the annular pressure was 12PSI. PHOTO 4 shows an annular pressure reading of 10.0PSI. Failure to maintain 100PSI on the tubing and annulus during shut in conditions constitutes a potential violation of the Permit.

b) Item C.8.b of the Permit also requires the Permittee to establish a range of annular fluctuation for all wells, and to include that range in quarterly reports. Hilmar staff commented during the virtual inspection that a range of annular fluctuation has not been established for well WD-2 or WD-3, and the range does not appear on any of the Q1-Q4 2020 quarterly reports. Failure to establish and maintain a range of annular fluctuation constitutes a potential violation of the Permit.

2) ZONE OF ENDANGERING INFLUENCE

Item B.1.d of the Permit requires the Permittee to review and submit an updated ZEI to EPA in January with the annual report. As of the date of virtual inspection EPA has not received a ZEI. Late submission of the ZEI calculation is a potential violation of the Permit.

3) DATA RECORDING

Hilmar stated that in January, February, and September 2020, well WD-2 experienced loss of data recording due to faulty data cards not being seated properly in the reader port. Item D.3 of the Permit describes monitoring frequency required for the injection wells. Lack of monitoring at Permit frequency is a potential violation of the Permit.

4) MONITORING DEVICE CALIBRATION

Item D.3.a of the Permit states that "All monitoring and recording equipment shall be calibrated and maintained on a regular basis to ensure proper working order of all equipment." During the virtual inspection, Hilmar staff could not describe or produce a calibration schedule for monitoring devices measuring parameters on the injection wells. In the Inspection Response provided by Hilmar, calibration certificates show two gauges were calibrated in November 2015 and June 2016, both of which appear to be expired. The calibration standards submitted by Hilmar in the Inspection Response appear to require more frequent calibration than once every 5-6 years. A work order shows notification that well WD-3 had a leaking flow meter as of November 11, 2020 that was replaced on December 17, 2020. A work order shows notification that a broken injection pressure sensor was logged for well WD-3 on October 12, 2020 and replaced on November 13, 2020. Inaccurate or incomplete monitoring of the parameters in the Permit are a potential violation of the Permit.

5) FINANCIAL RESPONSIBILITY:

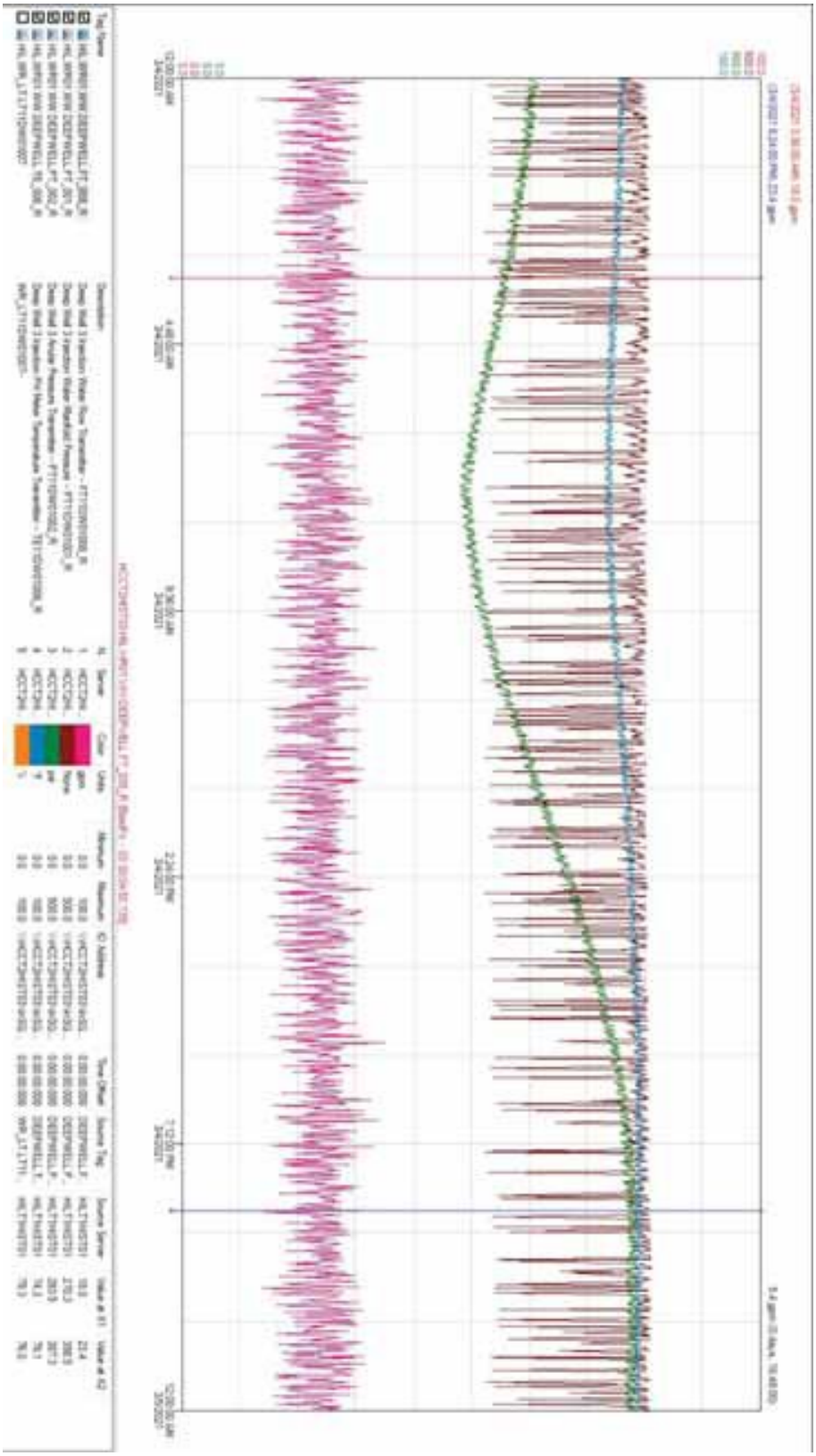
Cost estimates for Plugging and Abandonment of wells WD-2 and WD-3 are dated September 20, 2010 for the amount of $174,510. These estimates may need to be updated to reflect current Plugging and Abandonment costs.

APPENDICES

APPENDIX 1 – Output monitoring data screenshot from March 4, 2021

APPENDIX 2 – Photograph Log

Appendix 1—Output monitoring data screenshot from March 4, 2021



Appendix 2 - Virtual Inspection Photos

The following photographs were taken by Julie Connel on March 10, 2021 and submitted to Inspector Scavello via email.

PHOTO 1 – Cheese pit collection sump

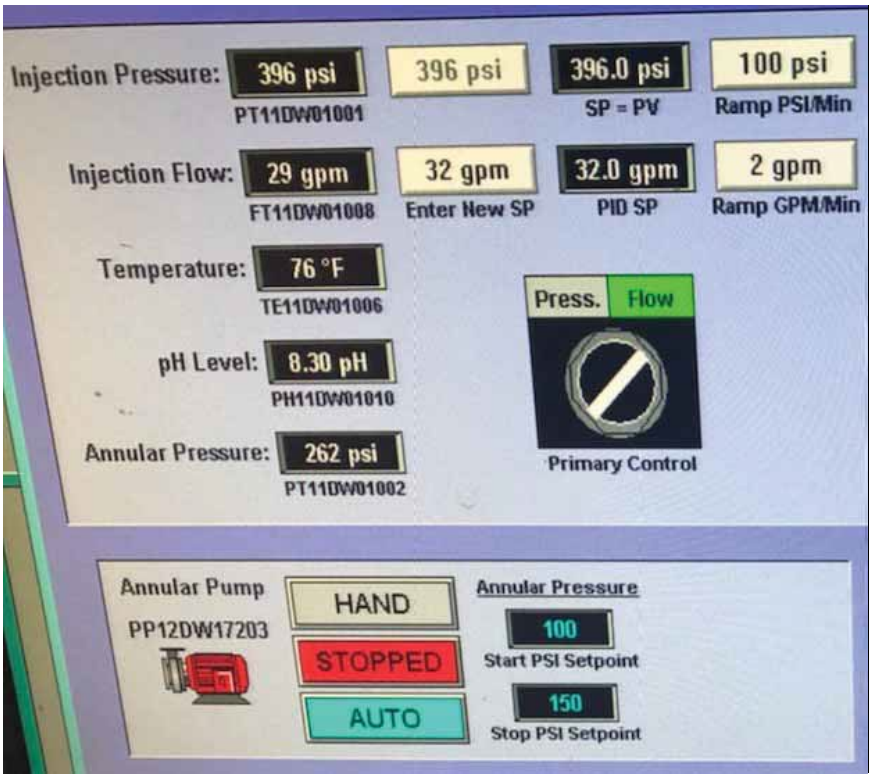


PHOTO 2 – WD-3 Control Screen

PHOTO 3 – WD-2 Data System Readout

PHOTO 4 – WD-2 Annular Pressure Gauge

PHOTO 5 - WD-3 Wellhead

PHOTO 6 – WD-3 Sample Port Location

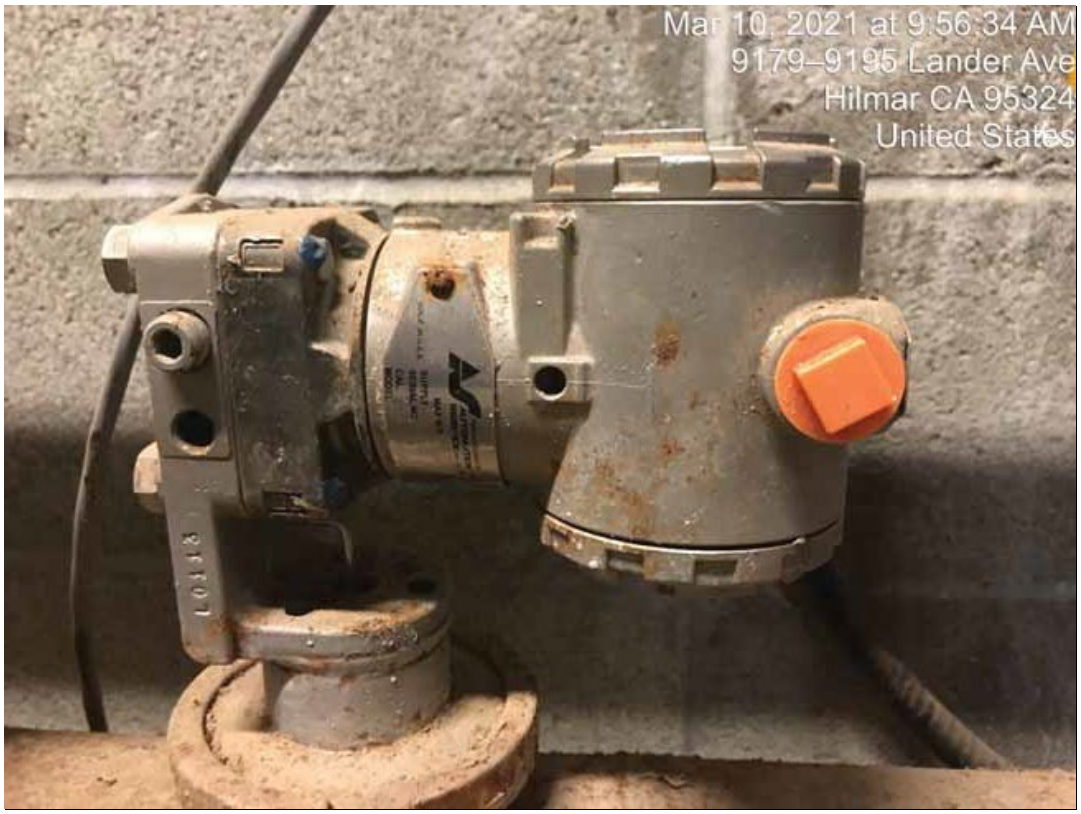


PHOTO 7 – WD-3 Injection Pressure Gauge

PHOTO 8 – WD-3 Annular Pressure Gauge

PHOTO 9 – WD-3 Annular Pressure Pump

PHOTO 10 – WD-3 Flow Meter

PHOTO 11 – WD-3 Data System Readout

PHOTO 12 – WD-2 Wellhead

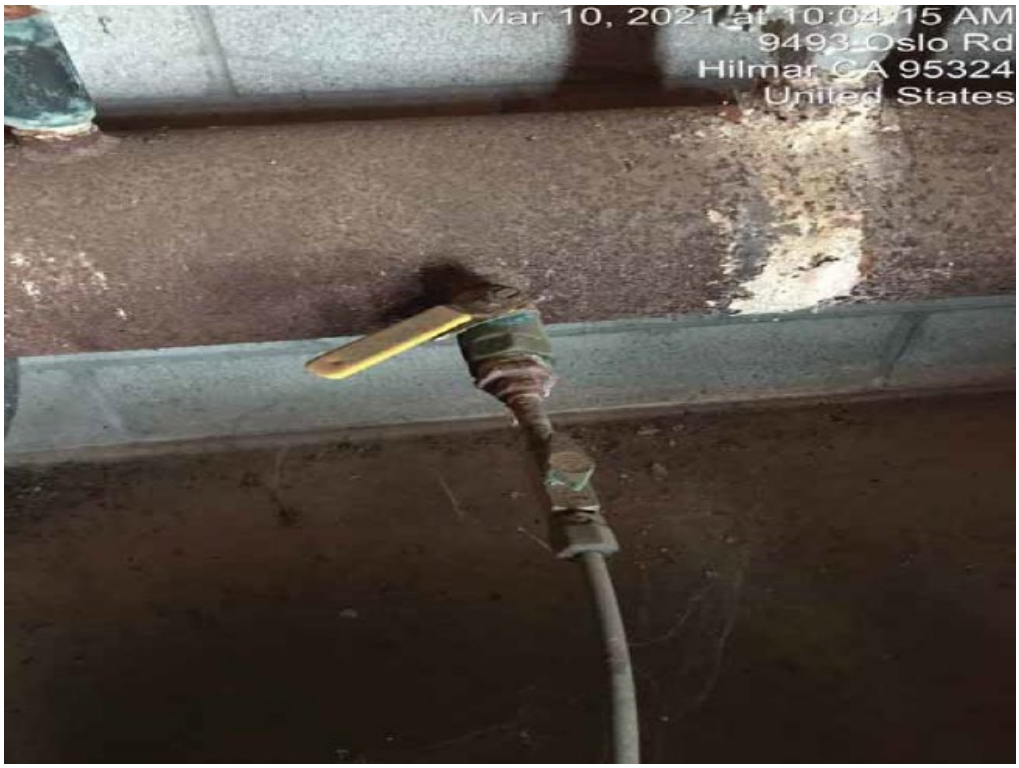


PHOTO 13 – WD-2 Sample Port Location

PHOTO 14 – WD-2 Injection Pressure Gauge

PHOTO 15 - WD-2 Flow Meter

PHOTO 16 – WD-2 Data System Readout with injection pumps showing “off”